

Product Data

Liquid-Dispensed Silicone Thermal Pad / Gap Filler

SILCOOL™ TIA221GF

**PRELIMINARY
Datasheet**

SILCOOL™ TIA221GF gap filler is a two-component, thermally conductive silicone material that is dispensed as a liquid and cured in place to create a heat path for efficient heat transfer. After being applied, its non-slumping pasty consistency offers physical stability to prevent run-off after dispensing. SILCOOL™ TIA221GF gap filler can typically be used as a liquid dispensed alternative to pre-fabricated thermal pads, and as a gap filler for a broad array of thermal designs in electronic components.

Key Features and Typical Benefits

- Low density
- Good thermal conductivity
- Easy to use 1:1 mixing ratio
- Fast, room temperature cure and good thixotropic properties
- Flame retardant: UL94 V-0 equivalent

Potential Applications

Thermal interface material designed for electronic components of consumer applications

Typical Physical Properties

Uncured Properties (23°C)		TIA221GF(A)	TIA221GF(B)
Appearance		Light Grey	Dark Grey
Viscosity* ¹	Pa·s	270	270
Viscosity* ²	Pa·s	140	140
Thixotropic Index, 1s ⁻¹ /10s ⁻¹		4.3	
Mix ratio by weight		100:100	
Viscosity after mixing* ¹	Pa·s	270	
Pot Life	hr.	1	
Cure condition	(70°C) hr.	1	
	(23°C) hr.	24	
Cured Properties (1hr at 70°C)			
Appearance		Grey	
Density	g/cm ³	1.95	
Thermal conductivity* ³	W/m·K	2.2	
Shore E		50	
Tensile strength		0.25	
Elongation		40	
Volume resistivity		≥1x10 ⁶ (estimated)	
Dielectric strength		≥15 (estimated)	

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Flame retardant (UL94)	V-0 (estimated)
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*1: Brookfield No.7, 20rpm, 23 °C *2: Rheometer, 10s⁻¹ *3: Hot wire method

Typical properties are average data and are not to be used as or to develop specifications.

Handling and Safety

Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be conducted before proceeding to determine compatibility.

- Wear eye protection when handling uncured rubber as it can irritate eyes. In case of eye contact, immediately flush eyes well with water and contact a physician.
- Maintain adequate ventilation in the workplace at all times.

Storage

- Store in cool dry place out of direct sunlight.
- Keep out of the reach of children.

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